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ABSTRACT

This paper reports on the current status of institutional research (IR) in community colleges. Studies indicate increased IR involvement in the last ten years, with the most recent research suggesting that 39% of the community colleges have IR programs; yet the typical institutional researcher still exists at the lowest level of staff administration and generally possesses few research skills. Types of studies which are most frequently conducted by institutional researchers, in rank order, include studies of students, curriculum and programs, institutional operations, faculty, and student personnel services. Sixteen representative studies are reviewed in this paper in order to provide models for beginning offices of IR. Criteria by which the studies are reviewed include purpose, results, prime sponsor, skills required in preparation, awareness of relevant literature, and examination of evidence that the study was successful in making institutional changes. In addition, the essential components of three successful institutional research programs are reviewed and compared, serving to illustrate coherent IR efforts. It is noted that the quality of community college IR depends not only on the individual institutional researcher, but also on the development of national standards of excellence. An extensive bibliography is included. (JDS)

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COMMUNITY COLLEGE INSTITUTIONAL RESEARCH TODAY

by
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Topical Paper No. 62
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THE INSTITUTIONAL RESEARCHER

Rice has asserted that "historically (community college) research endeavors have, with a few notable exceptions, been carried out in a relatively haphazard manner because the designated person didn't have the operating budget, support staff, or authority to initiate meaningful studies" (1974, p. 128). The numerous theoretical articles on institutional research--the subject of a later chapter--are useless in testing this assertion. Those who have established--or are thinking of establishing--an office of institutional research will need the facts. They will need to know how pervasive institutional research really is. In addition, they will legitimately ask about the researcher's actual training, his salary, his budget, his staff, and his organizational position. Furthermore, they will require information about the career a researcher can expect. Finally, they will need a detailed analysis of the products of institutional research: the studies themselves. But this last subject is important enough to be dealt with in a separate chapter.

The growing number of community colleges involved in institutional research is a clear sign of its continuing vitality. Studies indicate increased institutional research involvement in the last ten years. At present, 39% of the community colleges have "an institutional research program" (Platt, 1974a, 1975). Rates generally this high represent national growth over previous years (Swanson, 1965; Van Istendal, 1970; Platt, 1974a, 1975):

1965	1969	1973
Under 20%	33-1/3%	39%

Since most of these figures come from surveys by novice researchers, one must be cautious about relying on them too heavily. Platt's results (1974a, 1975) may be inflated and a 1971 study by Pieper found that only 16% of community colleges had offices of institutional research. Pieper's figure was not used because it contradicts both Van Istendal (1970) and Roueche and Boggs (1968).

Whatever the exact truth about national figures, differences among states certainly exist. Illinois' rate, for instance, exceeded the national average by twelve percentage points in 1974, twenty-one percentage points in 1977 (Survey of the Institutional Research Function..., 1974).

The pervasiveness of research activity is clear; its intensity is another matter. In 1968 community colleges averaged 1.1 studies per year (Roueche and Boggs, 1968). After this date, evidence is sparse. From 1969 through 1973 Montgomery Community College in Maryland completed an average of 4.5 studies a year (Gell and Bleil, 1973). In 1974 Virginia Community Colleges averaged 5.4 studies a year (Kelly and Jackson, 1975). This productivity, although possibly rising, is certainly meager. Equally important, these averages, because of the wide range they encompass, are somewhat deceptive. In the national study the range was from zero to thirteen; in Virginia from one to thirty-seven.

In fact, although there are some significant exceptions, intense research activity generally occurs only in the small number of large institutions that can afford it. Indeed, one researcher found a correlation of .75 between the number of institution studies and enrollment size (Roueche and Boggs, 1968). Another study found that in 1976 the smallest institutions had no research directors, but that in the largest the percentage reached 54% (Malott, Mensel, Roger, 1976). It is these institutions who seem most likely to be among the 19% who reported institutional research budgets of $30,000 or more (Platt, 1975).

Only institutions with budgets of at least that size could afford what has been established as the most common research office staff--one full-time professional and one clerical person. Therefore, it makes sense that even today only 28% of all institutions have a full-time institutional researcher (Chick, 1974; Malott, Mensel, Roger, 1976; Pieper, 1971; Survey of the Institutional Research Function..., 1974). Of course, this percentage varies from state

to state: it is 36 in Illinois, but only 11 in Alabama (Platt, 1975; Survey of the Institutional Research Function..., 1974; Dennis, 1975). On the whole, however, as with programs of institutional research, the number of institutional researchers has grown over the years. In 1965 less than 2% of community colleges had full-time researchers; in 1968 there were 22.9% (Roueche and Boggs, 1968; Swanson, 1965).

This growth has not been accompanied by a corresponding advance in the availability of training. As to kind of training, there is a clear preference for occasional national and regional workshops over formal programs. In fact, the market and the actual demands of the job discourage formal programs. Employers generally demand only a baccalaureate and are generally willing to pay no more--and sometimes considerably less--than $19,000 for a full year. Research experience and statistical knowledge may be commonly specified and a survey of presidents may add a familiarity with data processing and systems analysis. However, a survey of actual research competencies used on a daily basis indicated that there were none. You were expected to know you own college and to have a general knowledge of community colleges. You might use knowledge of research and statistics once a month; on the other hand, six months or a year might pass by before you used either again. You were unlikely ever to use anything as complex as analysis of variance, multiple regression, or non-parametric statistics (Bielen, 1974; Greenberg, 1975). It should be understood that this analysis reflects the general state, not the best practice of the profession.

At first glance, the researcher's organizational position seems to compensate somewhat for his low salary: he generally reports directly to the president. In Illinois, for instance, 76% of the researchers reported to their chief executive. This reporting relationship, however, does not indicate high administrative status. In fact, the list below suggests that when research is assigned to a particular person as a significant responsibility,

his job carries a title that reflects a low-level staff position (Broderick, 1973; Greenberg, 1975; Platt, 1974b; Survey of the Institutional Research Function..., 1974; Swanson, 1965).

North Carolina

1. Research Coordinator
2. Public Relations [Director]
3. Coordinator of Institutional Research
4. President
5. Dean of Instruction
6. Assistant to the President
7. Educational Development Officer
8. President
9. Vice-President
10. Director of Research & Planning
11. Director of Planning & Development
12. President
13. Director of Institutional Research
14. Director of Academic Programs and Research Director

The institutional researcher is a director, a coordinator, or an assistant too. This list also demonstrates some confusion: what title should the researcher have? what person should be responsible for such research when no full-time staffer bears the burden?

Institutional research can be a career if the researcher elects to professionalize himself and to engage in whatever other activities he feels are necessary to improve the profession. In addition, note should be taken of the emergence of research and planning positions at high administrative levels. Two positions may be singled out as examples: Planning and Research Services Coordinator for the Indiana Vocational Technical College ("Indiana Vocational Technical College," 1976) system of thirteen institutions and Assistant Chancellor, St. Louis Community College District (1976), with three colleges and an enrollment of 19,234. Both require five

years of administrative experience; one requires a masters degree, the other a doctorate. It would seem that either of these senior positions would fulfill the ambitions of the most eager novice researcher.

In summary, institutional research and the full-time researcher are becoming more and more evident on community college campuses, especially at larger schools. This growth means that more and more institutional research is being done, but it does not mean that productivity is very high; it is not. Nor does it mean that the prestige of the researcher is rising. On the contrary, he still exists at the lowest level of staff administration, and generally possesses few research skills. Although there is no indication that the researcher will rise in status, there is some evidence that institutional research itself is experiencing an elevation. The emergence of senior research and planning positions place institutional research closer to the center of things and provide a career goal to whet the aspirations of the more successful Directors. However, the general picture of community college institutional research is not conducive to high optimism: under-trained, under-budgeted, under-staffed, and at the lowest administrative levels, offices seem designed more to carry out "research endeavors...in a relatively haphazard manner than to initiate meaningful studies" (Rice, 1974, p. 128).

Job Description

Director of Institutional Research

Duties: Responsible for a coordinated program of Institutional Research which will include descriptive studies: for example, studies of student characteristics; evaluative studies of curricula and programs; operations research: for example, enrollment projections and alternative program strategies; policy and long-range planning studies.

Training: A Master's Degree. Knowledge of survey techniques, data processing, basic statistics, and research procedures.

Supervision given: A part-time assistant or assistants; clerical staff.

Supervision received: Reports to President in a staff role.

Salary: $16,000 - 22,000

INSTITUTIONAL RESEARCH

Having examined the nature of the institutional researcher, it is now necessary to analyze the nature of his research. What do institutional researchers do? Does this differ from what they prefer to do? Have research priorities altered over time? Inevitably the answers to these questions must lead to the analysis of the products of research themselves. Following Roueche and Boggs (1968) it was decided to collect and examine a number of studies which may be regarded as representative of the best current work in the field. It is hoped that these will serve as models for beginning researchers.

Three national surveys of community college institutional research have been completed in the last decade. Since they aggregated their data differently, they give additional insight into the products of research at the expense of identifying trends over time. Roueche and Boggs' survey produced the following table:

TABLE 1
AREAS OF JUNIOR COLLEGE INSTITUTIONAL RESEARCH EMPHASIS, RANKED BY FREQUENCY OF STUDIES (N=70)

Rank	Area	Research Studies in Progress	Research Studies Completed in Past Two Yrs.	Total	Percent of Total Studies
1	Students	45	54	99	41.6
2	Curriculum & Programs	23	26	49	20.6
3	Institutional Operations	20	20	40	16.8
4	Faculty	13	8	21	8.8
5	Student Personnel Services	9	7	16	6.7
6	Other	6	4	10	4.2
7	(Methods of) Instruction	3	0	3	1.3

Source: Roueche and Boggs, 1968, p. 40.

When Platt (1974a) completed a similar survey five years later, he kept Roueche and Boggs' categories, but aggregated the data by "total percentage of colleges which conducted research" within a particular category. According to Platt's data, over a two-year period at least three-quarters of the research-oriented community colleges produced studies in the following categories: students, institutional operations, faculty, student personnel services, and curricula and programs. Because these categories are listed in descending order of frequency, Platt sees a rise in the popularity of institutional studies and a drop in studies of curricula and programs. The methodology of his survey and Roueche's differs, however; consequently, Platt's conclusions are less firm than they might have been.

A third survey was completed in the same year as Platt's

(Morstain and Smart, 1974). Some of its categories are the same--studies of students, faculty studies, curriculum studies. Other categories differ: planning and coordination, budget and finance, organizational studies, data systems and computers, and space utilization. Comparison is made difficult additionally because the survey measured, not the number of studies, but those categories which institutional researchers perceived as high priority actual job responsibilities. On this scale, studies of students have the highest ranking by far; then, in descending rank order, come planning and coordination, organizational studies, faculty studies, curriculum studies, budget and finance, space utilization, and data systems and computers.

National studies are complemented by those on a state-wide scale. A Virginia survey of 1974 offers some support for Platt's rankings: studies of students were by far the highest priority with 46%; institutional operations were next with 23%; studies of curriculum and programs were in third place with 9%; faculty and student personnel services shared last place with 6% apiece (Kelly and Jackson, 1975). In Maryland in 1972 there was a survey with an entirely different set of categories: descriptive studies of faculty, students or the institutional dollar ranked highest with 31%; next were evaluation or outcome studies such as student followup and teaching effectiveness with 25%. Sharing last place with 22% each were operations research or housekeeping studies, such as space utilization and cost effectiveness, and policy and planning studies (Larkin, 1972). See Table 2, "Research Priorities."

TABLE 2
RESEARCH PRIORITIES

Kind of Study	Operational Measure	1st Priority	2nd Priority	3rd Priority	4th Priority	5th Priority	6th Priority	7th Priority	8th Priority
National 1968 (Roueche and Boggs)	Studies completed in a category	Students	Curriculum and Programs	Institutional Operations	Faculty	Student Personnel Services	Other	Methods of Instruction	
National 1973 (Platt)	Percentage of colleges conducting studies in a category	Students	Institutional Operations	Faculty	Student Personnel Services	Curriculum and Programs	Continuing Education	Methods of Instruction	
National 1973 (Morstain and Smart)	Categories of studies seen as high priority actual job responsibilities	Students	Planning and Coordination	Organizational Studies	Faculty	Curriculum	Budget and Finance	Space Utilization	Data Systems and Computers
State 1972 (Maryland)	Studies completed in a category	Descriptive Studies	Evaluative Studies	1 Operations Research 2 Policy and Planning Studies					
State 1974 (Virginia)	Studies completed in a category	Students	Institutional Operations	Curriculum and Programs	1 Faculty 2 Student Personnel Services				

Because of the contrasting terminologies of these studies, it may be hazardous even to guess at trends. Nevertheless, it is striking how persistently important studies of students are: no community college seems complete without its profiles of students and its followup studies of dropouts and graduates. In addition, the study of institutional operations may be supplanting that of curriculum, an understandable trend considering the increasing accountability pressure placed on community colleges. This pressure may also account for the probable rising importance of faculty studies, if these consist largely of examinations of faculty load and other measures of productivity. Curriculum study and the study of instructional methods, both of which deal largely with qualitative improvement, might easily be shunted aside in a rush toward cost-saving and self-justification.

In Roueche and Boggs (1968) there was an administrative consensus that these existing priorities represented an imbalance in institutional research efforts: studies of students were emphasized at the expense of curriculum and programs, and methods of instruction. In support of this conclusion, Morstain and Smart (1974) found the profile between preferred and perceived priorities an almost exact match, except in curriculum and programs, where researchers would prefer to do much more. Clearly there is a perceived need to do more research in curriculum and instruction.

One must not, however, carry this conclusion to the point of inferring actual conflict between the priorities of researchers and institutions. There is virtually no conflict between institutional researchers and presidents as to what research should be done and what the priorities are: students, planning, instruction, and curriculum are the top four. The compatibility of perceptions probably means that the researcher essentially reflects the operational philosophy of the institution (Boyers, 1971).

Whatever the research priorities, one thing is clear: research itself is not necessarily the researcher's top priority. Much of

his time is taken up by the tedious work of answering and routing questionnaires, coordinating information with state and federal agencies, completing HEGIS (Higher Education General Information Survey) and other external surveys, collecting and interpreting routine data. Moreover, these burdens are increasing in oppressiveness; a recent survey indicated that community college institutional research was largely a matter of filling out questionnaires and compiling data (Broderick, 1973). Although institutional researchers naturally chafe against these exigencies, the increase in federal and state reporting requirements is not unconnected with the rapid growth of their profession.

Up to this point discussion has been devoted to the products of institutional research described in very general terms. It is now necessary to become specific, to analyze some actual studies in various categories. Since these studies are representative of the best being currently produced, it is hoped that they can form a core library and act as models for beginning offices of institutional research. With this purpose in mind, the studies are taken from the ERIC system and all are listed with number of pages and ED numbers (for ordering information, see p.45).

For each of the following studies, these fundamental, generally-accepted questions will be answered:

1) What is its purpose? What are its results?
2) Who was the prime sponsor of the study?
3) What skills were required in its preparation?
4) Does the study show an awareness of the literature?
5) What evidence is there that this study was successful in making institutional changes?

Studies of Students

1. _____. The Academic and Remedial Placement Profile of Students Entering B.C.C. [Bronx Community College] in September, 1974 by Curriculum Group. Bronx Community College, Bronx, N.Y., 1974. 22pp. ED 099 051. (The anonymous authors are clearly institutional researchers.)

   1) Purpose and Results. Designed to evaluate the quality of placement in remedial sections. "An estimated six to seven hundred students who were placed into remedial courses, are found to be taking college level courses, while not enrolled in the remedial courses for which they were recommended."

   2) Sponsorship. Not indicated.

   3) Skills. Fisher's z method for averaging coefficients of correlation.

   4) Awareness of Literature. None indicated.

   5) Institutional Change. The recommendations are clear, if implicit. There is no indication of whether there were actually any institutional changes.

2. Ben K. Gold. Academic Performance of L.A.C.C. Transfers to California State University at Los Angeles, 1973-74. Los Angeles City College, Los Angeles, Calif., 1975. 10pp. ED 105 953. (Author is Director of Research.)

   1) Purpose and Results. To assess the performance of recent Los Angeles City College transfers to California State University at Los Angeles, and to compare with data from previous years. Neither attrition data nor grade point average give any evidence of "transfer shock," the general and significant drop in performance on moving from a two- to a four-year institution.

   2) Sponsorship. Not stated.

   3) Skills. Arithmetical.

   4) Awareness of Literature. None shown.

   5) Institutional Change. None indicated.

3. Allan MacDougall. A Study of Students Completely Withdrawing from Southwestern College, Fall 1973. (Parts I and II). Southwestern College, Chula Vista, Calif., 1974. 20pp. ED 097 942. (The author is Research Coordinator.)

1) Purpose and Results. Withdrawal rates at Southwestern are consistent over ten years and average for a California community college. Some significant results: part-time students withdraw at a rate five times greater than full-time students; full-time day students with no specific departmental major are twice as likely to withdraw as those with a major; the factor most strongly related to persistence is financial aid.

2) Sponsorship. "Increased legislative and public concern."

3) Skills. Arithmetical; statistical significance of correlations of grouped data (no tests named).

4) Awareness of Literature. None demonstrated.

5) Institutional Change. No recommendations.

Institutional Studies

4. James A. Durham. Occupational Needs Survey for the Okaloosa-Walton Junior College District. Okaloosa-Walton Junior College, Niceville, Fla., 1972. 45pp. ED 071 659. (Author is Director of Institutional Research.)

1) Purpose and Results. To survey employment needs in the two-county area and to relate these needs to college manpower supply. Estimates of total job vacancies, minimum educational needs of employers, job turnover rates. Information about acceptance of college alumni.

2) Sponsorship. Financed by the State Department of Education "to analyze the community's acceptance of graduates."

3) Skills. Arithmetical. Knowledge of survey techniques.

4) Awareness of Literature. Relevant bibliography.

5) Institutional Change. No recommendations.

5. Ivan J. Lach A Study of Divisional Differences in a Community College Organization. Lake Land College, Mattoon, Ill., 1972. 28pp. ED 069 271. (The author is Director of Admissions and Research.)

1) Purpose and Results. Theory holds that conflicts within an organization result from the different orientations of those who work for differing subunits--in the case of a community college, instruction, student services, and administrative services. At Lake Land there is indeed such a conflict between instruction and student services, on the one hand, and administrative services on the other.

2) Sponsorship. Unstated.

3) Skills. An application of organizational theory; enough knowledge of sampling to realize the sample was too small to establish statistical significance.

4) Awareness of Literature. Bibliography included.

5) Institutional Change. Some suggestions for resolving conflicts, all derived from organizational theory.

6. _____. Analysis of the Need for Reduction in Force of Professional Personnel. Grays Harbor College, Aberdeen, Wash., 1973. 42pp. ED 097 941. (Done by a consultant service, Boeing Education and Training Unit.)

1) Purpose and Results. Continuing enrollment declines indicate the need for retrenchment. An analysis of the ratio of employees to students is completed and compared with statewide averages. Using this analysis, the college finds itself overstaffed in faculty and in administration and recommends reductions and an orderly procedure for implementing these.

2) Sponsorship. The college itself as a result of declining enrollments and an increasing deficit.

3) Skills. Arithmetical only.

4) Awareness of Literature. None shown.

5) Institutional Change. It may be assumed that the reduction

in force took place.

7. Donald J. Finley. The Volume and Cost of Instructional Services at Virginia's Colleges. Virginia State Council of Higher Education, Richmond, Va., 1972. 72pp. ED 065 034. (Author is Assistant Director on the Council.)

1) Purpose and Results. Third annual report measures the productivity of all Virginia public colleges, including community colleges, in terms of ratio of FTE (full-time equated) students to FTE faculty, average student-credit-hours produced per FTE faculty, instructional cost per student credit hour produced, instructional salary cost per FTE resident teaching faculty. This is a responsible study which urges comparisons only by level and area of instruction.

2) Sponsorship. A document produced by a state-wide coordinating agency.

3) Skills. Arithmetical.

4) Awareness of Literature. Implicit.

5) Institutional Change. No indication, but there are obvious implications.

Study of Methods of Instruction

8. Gary F. Schaumburg. An Evaluation of a Self-Paced Approach to Elementary Chemistry Instruction. Cerritos College, Norwalk, Calif., 1973. 37pp. ED 081 409. (Author is Research Director of Office of Institutional Research.)

1) Purpose and Results. To measure the effectiveness of self-paced instruction in elementary chemistry. Self-paced instruction had a considerably higher withdrawal rate; however, those who used this method were uniformly more successful than those who completed instruction in the standard format.

2) Sponsorship. Requested by the Chairman of the Sciences, Engineering and Math Division.

3) Skills. Statistical: Chi square, Fisher's Test of a difference between uncorrelated proportions.

4) Awareness of Literature. None demonstrated.

5) Institutional Change. None shown.

Studies of Student Personnel Services

9. R. Bruce Tallon. An Evaluation of the Counseling Services at a Canadian Community College. 1973. 99pp. ED 085 053. (MA Thesis for Niagra University.)

1) Purpose and Results. To evaluate the effectiveness of counseling services, using as the criterion "client satisfaction," measured by a questionnaire. Three groups were sampled: users, and two groups of non-users--entering freshmen and matriculants. General satisfaction or expected satisfaction was expressed. Counseling would be sought primarily for "educational concerns" and career planning.

2) Sponsorship. MA Thesis.

3) Skills. Chi square.

4) Awareness of Literature. Thorough.

5) Institutional Change. Some very general suggestions for further research.

10. James W. Selgas and Clyde E. Blocker. Student Services: An Evaluation. Research Report No. 13. Harrisburg Area Community College, Harrisburg, Pa., 1974. 78pp. ED 097 073. (The authors are respectively the Director of Research and Community Services and the President.)

1) Purpose and Results. To evaluate student services with an eye to improving their effectiveness. On the whole, staff and students seem satisfied with student services, although there are areas that need improvement; for instance, there is definite need for the services of a full-time psychologist.

2) Sponsorship. Apparently the President's personal interest in student services.

3) Skills. Survey technique; arithmetical.

4) Awareness of Literature. Thorough.

5) Institutional Change. Numerous recommendations are made and there is a note indicating that they have been acted on.

Faculty Studies

11. Jerry C. Garlock. Collective Bargaining; Attitudes of College Presidents Compared with Presidents' of Academic Senates. OIR-75-25. El Camino College, Torrance, Calif., 1975. 6pp. ED 116 730. (Author is Associate Dean of Research.)

1) Purpose and Results. To delineate differences in attitude between community college presidents and presidents of their academic senates concerning collective bargaining. As expected, these differences were marked, with academic senate presidents generally favoring unionism. Both groups agreed that unionism would "unite the faculty into a strong and aggressive political force." They disagreed on such items as "under collective bargaining, unions will exploit the majority of faculty members for the benefit of the few." The study makes it clear that, even before unionism, there is a serious disparity of belief on this issue between the administrative and faculty leadership of California community colleges.

2) Sponsorship. Unclear.

3) Skills. Chi square.

4) Awareness of Literature. None shown.

5) Institutional Change. No recommendations.

12. William G. Keehn and Chester C. Platt. Instruction at De Anza: A Sampling of Faculty Opinion. De Anza College, Cupertino, Calif., 1974. 20pp. ED 115 328. (Authors work for Office of Institutional Research.)

1) Purpose and Results. To improve instruction. A survey of faculty opinion concerning instruction shows considerable confusion over such key issues as revealing instructional objectives to students, matching instructional techniques to objectives, and using tests to demonstrate mastery of what has been taught.

2) Sponsorship. Unclear.

3) Skills. Survey technique.

4) Awareness of Literature. Implicit; but none demonstrated.

5) Institutional Change. It is recommended that the faculty devote more thought to the instructional process.

13. Boris Blai, Jr. Two-Year College Faculties: Their Values and Perceptions [and] Values and Perceptions of Public and Private Junior College Students. Harcum Junior College, Bryn Mawr, Pa., 1973. 15pp. ED 076 194. (Author is Director of Institutional Research. Paper was first presented at a meeting of Eastern Psychological Association, May, 1973.)

1) Purpose and Results. To provide a key to the kind of places two-year colleges are, Blai surveys faculty values at a private junior college and three public community colleges. Survey found both faculties have a preference for the Protestant ethic in their professional lives but have self-oriented personal values. Faculties share a somewhat traditional approach to teaching. In addition, they agree on such important teacher traits as "acceptance of the junior college philosophy." A second survey (appended) concerns values of Harcum students, compared with those of students at public community colleges.

2) Sponsorship. Not clear.

3) Skills. Arithmetical.

4) Awareness of Literature. Yes.

5) Institutional Change. None suggested. Contrasts between what faculty believe, and what they perhaps should believe, are merely noted.

14. Alfred R. Hecht. Utility of the CIPP Model for Evaluating an Established Career Program in a Community College. Moraine Valley Community College, Palos Hills, Ill., 1975. 6pp. ED 120 203. (Author heads Office of Research and Evaluation. Paper presented at the annual meeting of the American Educational Research Association, April, 1976.)

1) Purpose and Results. To see if Stufflebeam's Context, Input, Process, Product (CIPP) model is applicable to evaluating a career program in a community college. The Medical Laboratory Technician program was used in a successful test of the model.

2) Sponsorship. Institutional.

3) Skills. Not specified.

4) Awareness of Literature. Yes.

5) Institutional Change. In the Medical Laboratory Technician program, equipment was updated, skill development materials were increased, and the program coordinator was replaced.

15. Gerry Hall. A Comparative Study of Specific Skill Requirements of Selected Employers and Clerical Course Content in a Community College District. Nova University Practicum, 1974. 38pp. ED 097 090. (Author is an employee of College of the Sequoias, Visalia, California.)

1) Purpose and Results. To evaluate the relevance of the business curriculum by comparing course content with employer needs. Typing, office machines and business mathematics courses exhibited discrepancies between the curriculum and real job demands. In addition there were important differences between equipment trained on and equipment actually used.

2) Sponsorship. Nova degree requirement.

3) Skills. Research design; arithmetical.

4) Awareness of Literature. Lengthy bibliography.

5) Institutional Change. Numerous practical recommendations.

Miscellaneous Study

16. _____. Educational Needs Assessment of Adults in the Globe-Miami Area. Final Report. Eastern Arizona College, Thatcher, Ariz., 1974. 69pp. ED 107 336. (The anonymous authors are Director of Institutional Research and President.)
1) Purpose and Results. Identification of community college programs needed by business and industry and desired by those citizens past high school age. An analysis of existing data and the results of a survey lead to the conclusion that programs should be developed in Business, Sales/Mid-Management, Secretarial, Auto/Diesel Mechanics, Justice Administration, Home Economics, Electronics, Drafting, and Mining Technology.
2) Sponsorship. Office of Education grant, apparently spearheaded by the president of the institution.
3) Skills. Survey techniques; arithmetical.
4) Awareness of Literature. Yes.
5) Institutional Change. Numerous recommendations made, with the endorsement of the president of the institution.

For a comparison of these studies along several dimensions, see Table 3, "Selected Characteristics of Exemplary Studies."

TABLE 3
SELECTED CHARACTERISTICS OF EXEMPLARY STUDIES

Number of Study	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
College Sponsored	?	?	No	No	?	Yes	No	Yes	No	Yes	?	?	?	Yes	No	Yes
Statistics Required	Yes	No	Yes	No	No	No	No	Yes	Yes	No	Yes	No	No	No	No	No
Awareness of Literature	No	No	No	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Institutional Change Recommended	Yes	No	No	No	Yes	Yes	No	No	No	Yes	No	Yes	No	Yes	Yes	Yes
Institutional Change Implemented	No	No	No	No	No	Yes	No	No	No	Yes	No	No	No	Yes	No	Yes

These sixteen studies, all selected from the ERIC system, are offered as a basic library of institutional research which can be purchased in hard copy for under forty dollars. They are by no means typical of institutional research studies; on the contrary, their unusually high quality is the result of two screenings--ERIC's and the author's own. These studies, then, are worth analyzing to identify some characteristics of community college institutional research at its best. They are characterized, first, by a general clarity of purpose. In addition, they focus on problems of some importance and their conclusions generally point toward institutional change, either in the form of actual recommendations, or by clear implication. When institutional change is not the object, as in Blai's study of faculty attitudes, the reader feels that his understanding of the community college is measurably enhanced.

As a whole the studies demonstrate a grasp of the literature in their field. In fact they are really replications growing out of that literature, and in no case create new knowledge in the general sense. Although they show an understanding of the necessary research techniques, none of the techniques used is very complex. A basic understanding of arithmetic, elementary algebra, survey techniques and elementary statistics is all that is needed for even the most formidable studies. In fact, of sixteen studies, only five require any statistical procedures whatever.

The authors of these studies also deserve some comment. Generally, they are institutional researchers. In some instances, however, studies by others were included to illustrate the various sources of institutional research. Included is a private firm's study of a possible reduction in force of a college's professional personnel; a study of the volume and cost of instructional services by an employee of a state council of higher education; a master's candidate's evaluation of counseling services; a study of the clerical curriculum by a faculty member.

Although all of these researchers apparently undertook their studies with the approval of the college, few clarify whether the initial impetus for their work was largely institutional or largely personal. In only five instances is the impetus for research clearly institutional. In four of these--and in no other cited study--significant institutional change resulted. For instance, an institutional study of the Medical Laboratory Technician program at Moraine Valley led to the updating of equipment and the replacement of the program coordinator.

In sum, the products of community college institutional research are well-defined. Much of the researcher's time is spent filling out questionnaires and state and federal forms. When researchers find time to do research, their priorities are largely consistent with those of their institution. At present, studies of students and institutional studies predominate. The predominance of these quantitative exercises is understandable in view of current pressures for accountability; understandable also is a largely unfulfilled yearning for studies of curriculum and instructional methods. When general trends are set aside, and specific studies are examined, it becomes clear that community college institutional research at its best is of acceptable quality. However, institutional research, even at its best, is entirely replicative and requires a few significant research skills. Still, such research can lead to significant change; this is more likely to happen if the institution itself directly prompts the study.

THE RESPONSIBILITIES OF INSTITUTIONAL RESEARCH

It is not enough to describe and analyze what an institutional researcher is and what he does; such description and analysis ignores the questions of what an individual researcher should do, and what the nation of researchers should be responsible for.

Clearly, researchers should be concerned about the establishment of research priorities at their respective institutions. In addition, the relationship between their research and institutional policy should be forthrightly addressed. Furthermore, whatever this relationship, the communication of the results of their research must be central. On a national level, moreover, loom the larger issues of community college institutional research: the professionalization of researchers, and the possibility of conducting institutional research on a national scale.

What a community college institutional researcher should do is perhaps less clear than what he should avoid. There is general agreement that his energy should not be dissipated by filling out endless forms and by fulfilling spur-of-the-moment, miscellaneous research requests (Cohen, 1975; Dressel and Associates, 1971a; Fenske, 1970). These jobs, however useful, create obstacles in the accomplishment of the real task--carrying out a coherent research program with serious planning and policy implications. But how can an institutional researcher create a coherent program? Fortunately, at least three such programs have already been outlined: Ben Gold's, created out of his personal experience as a professional researcher; Richard Alfred's, constructed by consensus for New York City Community College; and James Cook's, created by means of national consensus (Gold, 1973; Alfred, 1974; Cook, 1971).

TABLE 4
COMPARISON OF THREE RESEARCH PROGRAMS

	Gold	NYCC	National
1. Student profile preparation	x	x	x
2. Evaluation of student placement in courses and curricula	x	x	x
3. Student attrition and followup studies	x	x	x
4. Program evaluation	x	x	x
5. Trend identification (for example, enrollment projections)	x	x	x
6. Instructional method evaluation	x		x
7. Revenue studies		x	x
8. Facilities studies		x	x
9. Relationship of institutional goals to environment		x	x
10. Adequacy of statements of purpose as a reference for decisions		x	x
11. High school articulation		x	x
12. Community needs survey	x	x	
13. Faculty evaluation	x		
14. Provision of background information for proposal writing	x		
15. Assistance in preparation for accreditation	x		
16. Collection and dissemination of research information	x		
17. Maintenance of a clearinghouse for questionnaires	x		
18. Faculty characteristics and workload		x	
19. Occupational needs evaluation		x	
20. College governance evaluation		x	
21. Conditions which encourage experimentation with new techniques of teaching and learning			x

Any of these programs is better than none. Moreover, among the three, there is consensus on the five tasks which usually account for the majority of research assignments: student profile preparation, evaluation of student placement in courses and curricula, student attrition and followup studies, program evaluation, and trend identification. Furthermore, the two consensus-based programs agree on over 60% of their research tasks.

Still, there is the difficulty that these programs are little more than laundry lists of commonly encountered studies. Peterson (1971), in an important article, deals with and, to an extent, overcomes this difficulty. He postulates three categories of institutional decisions: those concerning policy, management, and operations. For each category there are appropriate kinds of research. For instance, at the lowest, operating levels of the institution, descriptive research--analyses and reports of current operations--is appropriate. On the other hand, at the highest policy level, long-range studies of organizational goal achievement and resource allocation are more to the point. Although these levels of research are clearly differentiated, they are also interdependent.

A coherent research program, however, is only a step towards institutional effectiveness; in addition, there must be a firm link between the researcher's work and institutional policy making. All theorists agree on this point, disagreeing only on the amount of involvement appropriate to the researcher. Stecklein (1970), the most conservative of theorists, feels that the institutional research office should maintain its objectivity by dissociating itself from policy making, even to the point of not recommending policy, but only reporting "implications in general terms." For Sheehan (1971) and Dressel and Associates (1971b), the institutional researcher is always neutral; he can present alternate courses of action, but not recommendations. Hubbard (1964) and Baskin (1964), on the other hand, see the institutional researcher

as a change agent in teaching and learning. To perform this function, Hubbard thinks the researcher should help establish and modify institutional goals and the ways institutions organize to achieve these. Torrence goes further, asserting that "institutional study should include participation in policy recommendations" (1964, p. 31). In fact, Montgomery declares that a researcher "must take stands which may influence policy making;" he should go beyond recommendations, to followup on the impact of recommendations, even to the point of advocacy (1967, 1970).

Martin (1971) theorizes generally on the need for extending the conventional role of the institutional researcher. He summarizes the ordinary contributions of this functionary: "providing demographic information on students; arranging comparative data with institutions of similar size on a wide range of quantifiable measures; presenting, through a review of the literature or by model-building, sets of alternative courses of action, curriculum options, innovations and experiments; and projecting trends or potential consequences of trends" (1971, p. 227). He asserts that the researcher performing only these is a captive of the political process, supporting, rather than being critical of the established consensus in a time of murky institutional goals and objectives. In Martin's opinion, the researcher should set himself the task of clarifying these goals and objectives.

All theorists concur on this point: the researcher should have a significant effect on his institution. To some this power to be effective lies in his objectivity. In essence, the researcher will be heeded because his constituency is the truth rather than any faction. To others, in varying degrees, the researcher's objectivity is the equivalent of powerlessness. To be effective, he must create his own constituency by means of varying degrees of advocacy.

At the core of this controversy over the role of the researcher is a common problem: how institutions should use research. The

researcher may avoid such obvious blunders as mixing line and staff functions, over-specializing in narrow studies, being tactless and breaching confidentiality (Doi, 1964). Still, he may fail to have a significant influence on policy. It is probably true that "a major factor in the growth of institutional research [has been] the demand for hard evidence as background for the shaping of resource allocation policy" (Mason, 1971, p. 188). Nevertheless, is institutional research actually used for this purpose? Doi feels that "where there is a high degree of commitment to the new (scientific) style of administration, there will generally be found near or at the upper stratum of the administrative hierarchy, in one form or another, an office of institutional research which coordinates and directly engages in institutional research projects" (1964, p. 56). However, Goodrich (1971) thinks that such a commitment is generally absent in the academic world where institutional decision making largely depends on key committee consensus rather than empirical verification. Goodrich feels that "we have added institutional research to our earlier ways of doing things but I fear that the requesting-then-ignoring of institutional research is becoming a new kind of ritual with which we have to deal" (1971, p. 67).

Under these circumstances, it is natural that some researchers would want to maximize their influence by achieving general consensus on research tasks and priorities and by involving their potential audience in the recognition of specific research problems. Perhaps in these ways the researcher obtains the confidence of academic administrators and gains their "commitment to the meaning of all possible research outcomes" (Holtzman, 1970, p. 16; McGannon, 1970). The researcher's role may also be enhanced if he reports directly to the president. Not only will he share the prestige of that office, he will gain the objectivity of reporting to no one functional unit and will have "direct access to all information which [he] deems necessary to fulfill [his] responsibilities" (Freed, 1971, p. 174; Cook, 1971; Horn, 1963; Kirks, 1968; Suslow, 1972). These strategies

will appeal to some; nonetheless, it would be wise for all to recognize that "the results of institutional research are destined to be used, and the determination of use lies in the hands of others... [the researcher's] influence is at best indirect and incidental" (Cavanaugh, 1964, p. 84).

Whatever his conception of his role, the institutional researcher should be particularly concerned about communication with his fellows because "more than anyone else at the institution [he] is in a position to understand basic concepts of planning and their complexities" (Gardner, 1973, p. 21). At the most basic level, he should provide institutional policy makers with a fact-book containing such building blocks of planning as:

1. Enrollment and student characteristics;
2. Student credit-hour production and full-time-equated students by level of institution and curriculum;
3. Grade point average of students by class level, sex and course load;
4. Faculty statistics;
5. Graduation statistics;
6. Multi-year growth trends (Bluhm, 1971, p. 180).

It should be noted that much of this information is already gathered in state and federal reports.

In addition to a fact-book, the institutional research office will certainly publish periodic reports. These are neither extended memos addressed to superiors or subordinates nor technical articles directed at one's peers. On the contrary, they are challenges to the general communications skills of the researcher who must make sure his reports are read and understood by all those who might find them useful. The usual advice about brevity and the avoidance of jargon pertains. Considerations should be given also to the use of graphics to supplement verbal explanations. Invariably, an initial summary is helpful and a bibliography often adds to the credibility of a study (Kirks, 1970).

If the researcher decides to go beyond the presentation of information, his report should reflect this decision. Policy implications should be spelled out, and specific recommendations should be clearly made. The researcher might even consider the format of the General Accounting Office, an investigatory arm of Congress. This format includes the written reaction of those who would be affected by the implementation of GAO recommendations (see p.31). A variant of this system is now used by the Division of Technical/Vocational Education of the state of Illinois.

The researcher may go beyond the presentation of information in another way: he may see himself as a unifying third force between management planners and academics "identifying those qualitative aspects of education which escape quantification and which must be included in the planning and decision processes which now rest so completely on quantifiable data" (Perry, 1972, p. 752). In fact, it is probably the researcher who understands best that what is quantifiable in higher education is a necessarily inadequate proxy for the qualitative--the process of learning and the state of being educated.

The general quality of community college institutional research is ultimately dependent not on the individual researcher, but on national standards of excellence. Such standards are fostered by first-rate training programs which are a prerequisite to professional status, by national organizations which oversee the quality of the field and provide a forum for practitioners, and by journals, forums which set the highest professional standards.

COMMENTS OF THE DEPARTMENT OF HEALTH, EDUCATION AND WELFARE ON THE COMPTROLLER GENERAL'S REPORT TO CONGRESS ENTITLED "ASSESSMENT OF THE FEDERAL PROGRAM FOR STRENGTHENING DEVELOPING INSTITUTIONS OF HIGHER EDUCATION" -- June 27, 1975 B-164031(1)

GAO RECOMMENDATION

The Secretary of HEW should direct the Commissioner of Education to:

Reconsider the criteria that OE established to identify developing institutions to insure that such criteria in fact identifies [sic] those institutions intended by the legislation.

DEPARTMENT COMMENTS

We concur. We are currently reconsidering the criteria that OE published in order to establish an even more precise yardstick. The quantitative factors have been expanded from eight to twenty-six. The attempt is being made to weigh them in terms of their validity, then to develop institutional profiles based on these weighted factors. This reexamination of data will lead to a more precise means of identifying developing institutions.

Also, effort is being made to chart the nature and process of institutional development. The range which was published in the Regulations in June 1975 attempts to assist institutions in determining where they stand in relation to their peers within the universe of developing institutions. Institutions qualifying for the Basic Program are considered for funding at any point beginning with the 25th percentile and clustering between the 50th and the 75th percentiles. Colleges with percentiles at or above the 75th percentile are considered qualified to complete in the Advanced Program. Institutions whose quantitative measures exceed the 95th percentile are considered too developed to be "struggling for survival."

Source: "Assessing the Federal Program...," 1975, p. 34.

The literature notes two graduate programs for institutional researchers--at the University of Michigan and at Florida State University (Rice, 1974). In addition, there is occasional in-service training. For instance, in 1972-73 there was a year-long training program in California (Sheldon and Cohen, 1973). More recently, in the summer of 1976, a short-term Conference on Institutional Research in Community Colleges was held, co-sponsored by the American Association of Community and Junior Colleges, the College Entrance Examination Board, and the Educational Testing Service. However, at present no clear connection exists between training and professional status, as in such acknowledged professions as the law and the professoriate.

There are two national organizations, the Association for Institutional Research (Lins, 1966) and the more recent Special Interest Group for Community-Junior College Research of the American Educational Research Association. Both offer professional training opportunities. Although in theory both also give community college researchers a forum, in practice the latter is far more useful in this regard. Another, more permanent forum for the community college researcher is the recently-created journal, Community/Junior College Research Quarterly. Finally, there is the ERIC Clearinghouse for Junior Colleges. This subsystem of the ERIC network makes community college institutional research documents available on microfiche. ERIC encourages researchers to send in their studies for possible incorporation in the system. Submitted documents are screened for probable interest beyond a single institution and for proper use of research techniques. Rejected documents are returned with suggestions for revision.

National standards of excellence, however, are only a means to an end: a sense of national purpose. It may be, as Lewis B. Mayhew said a decade ago, that institutional research is too parochial, that "the greatest contribution [it could make] would be to provide a factual, empirical base upon which national,

regional, state and local policy can be based" (1966, p. 7). Certainly, ten years later, only limited progress has been made on a national scale. Generally, data collection by federal agencies is motivated as much by compliance requirements as by the desire to assist in the formulation of policy. Even when federal and national agencies would like to provide policy assistance, they are plagued by lack of agreement among themselves, and within the higher education community: what data should be collected? how should key terms be defined? An especially difficult definitional problem stems from the predominance of senior institutions in state, regional and national decision making: the tendency for surveys to lack categories appropriate to community colleges.

Moreover, problems of definition are not entirely the result of disagreements and biases among researchers and data gatherers. Many are, in fact, part and parcel of the diversity that characterizes American higher education. In his interinstitutional research, Adrian Harris (1973) ran into these typical problems: calendars differed, full-time-equated students were computed differently, parallel departments had very different purposes. Strikingly, Harris was comparing, not a wide variety of institutions, but six public universities within a single state system (Chamberlin, 1971; Harris, 1973; Keene, 1973; Wellman, 1974). Partly for these reasons and partly because of alleged faults in conceptualization, national educational models such as those created by NCHEMS (National Center for Higher Education Management Systems) have been subject to serious criticism (Dresch, 1975; Fincher, 1973; Saupe, 1971).

A discussion of general concerns may do no more than clarify the dilemmas that face community college institutional research in the next decade:

1) How should the researcher's priorities be established?
2) What should be the relationship of his research to institutional policy?
3) How should he communicate the results of his research?

4) What should be his relationship to his profession?

5) How should he promote the development of national standards? A national system of data collection and analysis?

No community college institutional research program can avoid addressing these questions.

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